UNDER-FREQUENCY LOAD SHEDDING TECHNIQUE CONSIDERING RESPONSE BASED FOR ISLANDING DISTRIBUTION NETWORK CONNECTED WITH MINI HYDRO

This project is presented in partial fulfillment for the award of the
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ABSTRACT

Under-frequency Load Shedding (UFLS) is a technique to remove the unbalance load demand over generation supply in some part of the system. The application of this technique will maintain the power system stability. UFLS operate successful on the grid connected rather than islanding network system. This is due to islanded system is not as strong as grid connected, thus a suitable UFLS scheme is required. The aim of this research is to design UFLS considering response based for an islanded system. The response based is based on the swing equation which relies on frequency and rate of change of frequency measurement for shedding the required amount of load. The technique is modeled by using PSCAD simulation tool. A simulation study on a distribution network connected with mini hydro generation is carried out to evaluate the UFLS model. It is performed under different load condition: peak load, base load and overload scenario. The results have shown that the load shedding technique have successfully shed certain amount of load and stabilized the system frequency following overload.

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